



**COLORADO**  
**DEPARTMENT**  
**OF HEALTH**

May 1, 1991

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**RE: REVIEW AND COMMENT: REMEDY REPORT - OPERABLE UNIT 3,  
IHSS 199, FINAL DRAFT, APRIL, 1991**

Dear Mr. Hestmark,

The Colorado Department of Health, Hazardous Materials and Waste Management Division (the Division), has reviewed the above referenced document submitted by DOE and it's prime operating contractor, EG&G. The Division's comments are attached.

The Division found this version of the Remedy Report for IHSS 199 to be much improved compared to the previously submitted version. However, members of the Rocky Flats Program Unit (RFPU) are still reviewing the risk assessment portions of the document and their comments will be forwarded at the earliest possible time. We are willing to grant approval of the document pending the incorporation of these comments and comments from the RFPU.

If you have any questions concerning these comments, please call Joe Schieffelin of my staff at 331-4421.

Sincerely,

Gary W. Baughman  
Unit Leader, Hazardous Waste Facilities  
Hazardous Materials and Waste Management Division

cc: Fraser Lockhart, DOE  
Bob Birk, DOE  
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DOCUMENT CLASSIFICATION:  
REVIEW WAIVER PER  
CLASSIFICATION OFFICE

Colorado Department of Health

Review and Comment

Remedy Report - Operable Unit 3, IHSS 199  
Draft Final, April, 1991

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General Comments

1) This version of the Remedy Report is very much improved over the draft version submitted for review in October, 1990. The Division appreciates the improved content, readability, and presentation of the subject matter.

Specific Comments

Section 1.2: In the third paragraph of this section, the 0.9 pCi/g CDH standard is referenced as being more stringent than a 0.2 E-6 pCi/gm EPA standard. Obviously the EPA standard, as written in the text, is more stringent. Please clarify this possible typo.

Section 1.2: In our comments to the draft version of this document, the Division asked for the inclusion of a map showing the present and future land-use zoning for the IHSS 199 area (similar in scale and coverage to Figure 2-1). We still believe this would be a valuable addition to this document. Using county and state land-use maps, present land-use zoning should not be hard to determine. Future land-use could either be assumed or drawn to coincide with the "residential" and other designations that have been included in the risk assessment calculations. Maps of this nature will tremendously aid the visualization of the present and future problems that will be faced within IHSS 199. They will also help the reader interpret some of the assumptions that have been made within the risk assessment.

The other maps that the Division had asked for were very informative. Thank you for including them.

Section 2.2.3.2: Even after the addition of Figures 2-10 and 2-11, the text is still unclear on a few items related to the tilling. Please clarify whether the data on Figures 2-10 and 2-11 represent the pre- or post-tilling conditions. Also, please explain whether or not the land lying between tilled strips was ever sampled and, if so, what the data showed. The Division feels that it is

important to note at some point in the text that upon successful vegetation, the remedy to these acreage tracts is only half completed.

Section 2.2.3.2: In the draft version of this document, irrigation and the possible sources of irrigation water were discussed. However, no discussion of irrigation appears in this version. Please explain why irrigation for better re-vegetation is no longer needed. If it is still needed, please explain in the text where it will be used and what the water source will be. To reiterate the Division's position, the use of any on-site water for irrigation is unacceptable until these water sources have been completely characterized.

Section 5.0: As we stated in the comments to the draft, the Division feels that some sort of summary should be added to this section that discusses the effectiveness of the tilling in reducing plutonium soil concentrations (i.e., tilling reduced the soil concentrations by a factor of X on the remedied acreage, etc.). Also, some discussion is needed to summarize the problems with re-vegetation and soil stabilization that have been experienced on this acreage and what plans are being made to improve this in the future. Both of these items would be a discussion of remedy-related issues and it seems appropriate to include them in a section entitled "Conclusions and Recommendations" of the Remedy Report.

Appendix C: On Table C.2 of this section, it appears there is an error. According to the text on the previous page, the background risk for cancer is 0.13. The absolute risk is 0.1300003 for 1 pCi/g. However, the table shows 1.30000003 pCi/g, an error in decimal placement and addition. It also seems strange that 2.2 E-7 was rounded up to 3 E-7.

On Table C.4, it is interesting to note that both within the current and future use scenarios, inhalation is not the principle risk contributor. This casts the conceptual model in doubt as well as all the discussion in the text that mentions inhalation of dust as the primary pathway. Please explain this apparent contradiction to the Division or add clarifying text.

It is difficult to jump from the table presented on the bottom of page C-3 to Table C.2 to Table C.4. The tables show different calculated risks for apparently the same situations. Please clarify this problem with better tables or clarifying text.